KOVALENKO, I.

Problems in vocational education as shown in Party decisions.
Prof.-tekh. obr. 12 no.6:24-26 Je '55.   (MIRA 8:9)
(Technical education)

KOVALENKO, I.

Improve the quality of educational literature. Prof.-tekh.obr.
12 no.11:29-30 N '55.
(MLRA 9:2)

1.Direktor Vsesoyuznogo uchebno-pedagogicheskogo izdatel'stva
"Trudrezervizdat".
(Technical education--Textbooks)

KOVALENKO, I.

As determined by a variable conjuncture. Prof.-tekhn.obr. 13 no.3:
26-28 Mr '56. (Europe, Western--Technical education)(MLRA 9:7)

KOVALENKO, I.G., inzhener-pedagog.

Technical training and the institution of higher learning.
Politekh. obuch. no.3:3-5 Mr '57.
(Technical education) (Education, Higher)   (MLRA 10:5)

KOVALENKO, I.

27-12-19/27

AUTHOR: Kovalenko, I., Chief Editor of the All-Union Educational-Pedagogical Publishing House "Trudrezervizdat"

TITLE: More Literature for the Training of Workmen (Bol'she literatury dlya obucheniya rabochikh)

PERIODICAL: Professional'no - Tekhnicheskoye Obrazovaniye, 1957, # 12, p 23-24 (USSR)

ABSTRACT: In 1957, the All-Union Instructional-Pedagogical Publishing House "Trudrezervizdat" has accomplished a great work in publishing instructional and methodical literature for the schools of the State's Labor Reserves System. By request of the TsK VLKSM and the book-selling organizations, the edition of a number of textbooks was increased to satisfy the needs of the youth working on virgin lands, the construction sites of Siberia and the Far East. During the past year the Publishing House has printed approximately 600 titles of textbooks with editions of about 7,500,000 copies. The article lists the titles of a number of new textbooks, reprints of old books, manuals and books on new techniques and advanced methods of labor as well as on questions relating to the training of work-

Card 1/2

KOVALENKO, I.

SUBJECT: FINLAND/Schooling   27-8-22/32

AUTHOR: Kovalenko, I.

TITLE: In the Schools of Finland (V Shkolakh Finlyandii)

PERIODICAL: Professional'no - Tekhnicheskoye Obrazovaniye, Aug. 1957, V. /
                # 8, p 30-31 (USSR)

ABSTRACT: In connection with the visit by N.A. Bulganin and N.S.
                Krushchev to Finland, where they visited a trade school in
                Lahti, the article describes the Finnish educational facilities.
                The author pays special attention to professional education
                which he regards as being of a good standard.

                The article contains 2 photos.

INSTITUTION:

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress

Card 1/1

AUTHOR: Kovalenko, I.   27-58-5-10/18

TITLE: Some questions of Professional Pedagogics Abroad and in the
                USSR (Nekotoryye voprosy professional'noy pedagogiki za ru-
                bezhom i v SSSR)

PERIODICAL: Professional'no-Tekhnicheskoye Obrazovaniye, 1958, Nr 5,
                pp 20-23 (USSR)

ABSTRACT: Most countries have two kinds of education, technical (for
                technicians and engineers) and professional. Problems of
                the former are studied in special institutes in Germany,
                France, the USA, Switzerland, UNESCO and the USSR. There
                exist 3 main systems, the Soviet, the American, and the
                German. The Soviet system aims at instilling the right
                habits. The USA system is described, with especial emphasis
                on its racial prejudice (books of Ivan Hunter (Iven Khanter)
                are quoted). Automation is the main element, and is likely
                to produce vast unemployment. The German system is next
                described, including the retraining in England "of a third
                of all workers"   (the cadres absorbed by industry during
                the world war).

AVAILABLE: Library of Congress
Card 1/1   1. Education Systems-USSR   2. Education Systems-USA
                3. Education Systems-Germany

AUTHOR: Kovalenko, I.   SOV/27-58-11-24/29

TITLE: The Teaching Literature to be of Better Quality (Vyshe ka-
               chestvo uchebnoy literatury)

PERIODICAL: Professional'no - tekhnicheskoye obrazovaniye, 1958, Nr 11,
               p 25 (USSR)

ABSTRACT: The Vsesoyuznoye uchebno-pedagogicheskoye izdatel'stvo "Trud-
               rezervizdat" (All-Union Teaching-Pedagogical Publishing
               Office "Trudrezervizdat") has considerably increased the
               publication of teaching literature for Labor Reserve school,
               and for training workmen on the job. The author lists a
               large number of the textbooks issued for various trades.
               They include 3 textbooks (translated from English) on car-
               pentry, mechanical treatment of metals and work with con-
               crete, various manuals and books on professional education
               in Yugoslavia, China, Czechoslovakia, etc. Though the issue
               of teaching literature increases from year to year, the de-
               mand for it is still considerable. The author mentions the
               textbooks to be issued in 1959, and points out that much
               has to be done for improving the quality of the literature.
Card 1/2   The textbooks should be revised, and reduced in size. The

The Teaching Literature to be of Better Quality   SOV/27-58-11-24/29

planned reorganization of the system of national education
will demand a still greater increase in the issue of in-
structional literature.

1. Personnel--Training   2. Literature   3. Universities--Textbooks

Card 2/2

KOVALENKO, I.

Let's train qualified workers. Okhr.truda i sots.strakh. no.7:
45-47 Jl '59.   (MIRA 12:11)
(Safety education, Industrial)

KOVALENKO, I.

Textbooks and teaching aids for industrial training in secondary schools. Politekh.obuch. no.10:90-91 O '59. (MIRA 13:2)
(Technical education) (Textbooks)

OSIPOV, Aleksandr Pavlovich; KOVALENKO, Innokentiy Georgiyevich; PETROV,
Yevgeniy Aleksandrovich; FILATOVA, I.T., red.; RAKOV, S.I.,
tekhn.red.

[The Soviet worker and automation] Sovetskii rabochii i avto-
matizatsiia; tekhnicheskii progress i podgotovka rabochikh kadrov.
Moskva, Izd-vo VTsSPS Profizdat, 1960. 214 p.   (MIRA 13:11)
        (Machinery industry)   (Automation)
                (Technical education)

KOVALENKO, I. I. Cand Biol Soi -- (diss) "Improvement of the saliferous soils of Poles'ye and the northern forest-and-steppe region of the UkSSR." Kiev, 1958. 18 pp (Min of Higher Education USSR. Rostov-on-Don State Univ) 150 copies (KL, 36-58, 111)

-14-

SAMBUR, G.N.; KOVALENKO, I.I.

Improved and efficient utilization of saline lowland soils
in southern Polesy'e and the northern forest-steppe of the
Ukraine. Pochvovedenie no.12:36-44 D '59.
                                        (MIRA 13:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut zemledeliya.
            (Ukraine--Alkali lands)

KOVALENKO, I.I.

Studies of the development cycle of some helminths parasitic
in domestic ducks raised on farms in the shore area of the Sea of
Azov. Dokl.AN SSSR 133 no.5:1259-1261 Ag '60.   (MIRA 13:8)

1. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy
veterinarii g. Kharkova. Predstavleno akad. K.I.Skryabinym.
        (Taganrog Gulf--Worms, Intestinal and parasitic)
        (Parasites--Ducks)

KOVALENKO, I.I.

Enzootic outbreak of a mixed invasion in chickens. Trudy Ukr.
resp. nauch. ob-va. paraz. no.2:137-140'63   (MIRA 17:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'-
noy veterinarii.

KOVALENKO, I. I.

KOVALENKO, I. I. -- "Pressure Water Breaks, Combined With Turbine Blocks of Hydrostations." Sub 21 Apr 52, Moscow Inst of Engineers of Water Economy imeni V. R. Vil'yams. (Dissertation for the Degree of Candidate in Technical Sciences).

SO: Vechernaya Moskva, January-December 1952

KOVALENKO, I.I., kandidat tekhnicheskikh nauk.

Twenty-fifth anniversary of the Moscow Institut of Water-Supply
Engineering. Gidr.i mel. 8 ro.5:63-64 My '56.   (MLRA 9:8)
(Moscow--Water-Supply engineering)

Kovalenko, I.I.

AVER'YANOV, S.F.; ALEKSANDROV, B.K.; ASKOCHENSKIY, A.N.; BLIZNYAK, Ye.B.;
ZAMARIN, Ye.A.; KOVALENKO, I.I.; KOCHINA, P.Ya.; KUZNETSOV, I.A.;
POSLAVSKIY, V.V.; SHIBNYY, M.F.; TURCHINOVICH, V.T.; FAVORIN,
N.N.; SHAROV, I.A.

Aleksei Nikolaevich Kostiakov; obituary. Izv. AN SSSR. Otd. tekh.
nauk no.10:113-114 O '57.   (MIRA 10:12)
         (Kostiakov, Aleksei Nikolaevich, 1887-1957)

KOVALENKO, I.I.

99-58-2-8/9

AUTHOR: Kovalenko, I.I., Dotsent, Director of the Institute

TITLE: The Moscow Institute of Hydraulic Engineering imeni V.R.
              Williams - Birthplace of Hydro-Meliorative Workers (Moskov-
              skiy institut inzhenerov vodnogo khozyastva imeni V.R.
              Vil'yamsa - Kuznitsa gidromeliorativnykh kadrov)

PERIODICAL: Gidrotekhnika i Melioratsiya, 1958, # 2, pp 53-59 (USSR)

ABSTRACT: This article deals withe the development of hydro-melio-
              rative work in Russia from the beginning of this century and,
              more specifically, with the founding and development of the
              Moscow Institute of Hydraulic Engineering. The founding of
              this institute was planned before World War I, but was reali-
              zed only in 1930, when the Faculty of Engineers of the Agri-
              cultural Academy imeni Timiryazev was transformed into an
              independent institute. The institute had from the start
              two aims: 1. Agricultural hydro-technical melioration with
              special courses on irrigation and drainage. 2. Hydraulic
              engineering and utilization of water energy. At present
              there are 3 faculties at the institute: 1. The Hydro-Melio-
Card 1/2   rative Faculty, 2. the Faculty of Hydraulic Engineering and

99-58-2-8/9

The Moscow Institute of Hydraulic Engineering imeni V.R. Williams - Birth-place of Hydro-Meliorative Workers

Hydro-Electrical Power Plants, 3. the Faculty of Mechanization of Hydro-Meliorative Work. During its existence more than 5,000 engineers have graduated from this institute. Many of them have become famous scientists, as, for instance, Professor L.M. Emel'yanov, in charge of the Chair of Constructive Mechanics of the Institute; V.A. Shaumyan, Deputy Director of VNIIGiM; S.A. Altunin; N.A. Yanishevskiy; N.A. Gastunskiy; P.I. Shipenko; Ya.A. Palkuyev; A.N. Kamenskiy; K.A. Slava-chevskiy; Academician V.V. Poslavskiy. The collective of scientific workers has published more than 600 scientific studies. The institute has also elaborated method and schemes for large irrigation projects in various parts of the USSR, for instance, the irrigation of 4 million ha along the Volga, the irrigation of 1.5 million ha in Central Asia and the Transcaucasus. The institute also prepared plans for projects to be carried out during the 6th 5-Year Plan.

AVAILABLE: Library of Congress

Card 2/2

KOVALENKO, I.I., dotsent, kand.tekhn.nauk

Design of the interior curvilinear surfaces of penstocks in
consolidated hydrelectric power stations. Nauch.zap. MIIVKH
20:60-77 '58.

(Penstocks)   (MIRA 13:6)

KOVALENKO, I.I., dotsent.kand.tekhn.nauk

Technique of the production of meodels of hydraulic structures from organic glas (Plexiglas). Nauch.zap. MIIVKH 20:298-312 '58.

(Hydraulic models)   (Plexiglas)   (MIRA 13:6)

KOVALENKO, I.I., dotsent, kand.tekhn.nauk; TKACHENKO, P.Ye., kand.tekhn. nauk

Laboratory investigations of unsteady work regimen of a hydro unit due to load rejection. Nauch.zap. MIIVKH 21:46-87 '59.   (MIRA 13:6)

(Hydraulic turbines)

TRZHETSYAK, M.A.; KOVALENKO, I.I.

The AG-10 program-controlled multistage electroplating unit.
Biul.tekh.-ekon.inform. no.2:9-12 '62.
(Electroplating—Equipment and supplies)   (MIRA 15:3)

KOVALENKO, I.I., inzh.; L'VOVSKIY, Ya.L., inzh.; KUZ'MIN, Yu.P., inzh.

Semiautomatic welding with a magnetized flux. Svar. proizv.
no.11:31-32 N'63.
(MIRA 17:5)

1. Makeyevskiy zavod metallokonstruktsiy i Gosudarstvennyy
institut po proyektirovaniyu, issledovaniyu i ispytaniyu
stal'nykh konstruktsiy i mostov "Proyektstal'konstruktsiya".

KOVALENKO, I.I., kand. tekhn. nauk

Use of plastic materials in draining excessively wet soils. Gidr.
i mel. 16 no.8:15-26 Ag '64.   (MIRA 17:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki i
melioratsii imeni A.I. Kostyakova.

KOVALENKO, I.N.

Determining the correlation functions of certain processes associated with servicing problems. Dop. AN URSR no.5:480-481 '58.

(MIRA 11:6)

1.Institut matematiki AN USSR. Predstavleno akademiko AN USSR B.V. Gnedenko [Hnidenko, B.V.].

(Probabilities)

16.6200

39401

S/044/62/000/006/071/127
B168/B112 .

AUTHOR: Kovalenko, I. M.

TITLE: Bayes decision functions for a hypergeometric set of
              distributions when a choice has to be made between two
              decisions

PERIODICAL: Referativnyy zhurnal. Matematika, no. 6, 1962, 17, abstract
              6V87 (Visnyk Kyivs'k. un-tu, no. 2, ser. astron., matem.
              ta mekhan., no. 4, 1959, 157-162)

TEXT: A batch contains N articles, k of which are rejects and the
remaining $N - k$ are satisfactory; k is a random value with an arbitrary
distribution function. One must adopt either decision 1, i.e. recognize
the whole batch as unsatisfactory, or decision 0, i.e. recognize the
whole batch as satisfactory. $W(k, i)$ are losses resulting from the
adoption of decision i, $i = 0, 1$, if the batch contains k unsatisfactory
articles. If (1) $W(k, 1)$ does not increase in accordance with k, whilst
$W(k, 0)$ on the other hand does not decrease in accordance with k;
(2) min $\{W(k, 0), W(k, 1)\} = 0$ with all values of k; (3) the cost of one

Card 1/2

S/044/62/000/006/071/127
B168/B112

Bayes decision functions for a...

observation, consisting of the extraction of 1 article from the batch, is
constant, then the Bayes decision is described by a straying point (n, k_n)
where k_n is the number of unsatisfactory articles extracted during n
observations between the upper and the lower limits; decision 1(0) is
adopted when the point coincides with the upper (lower) limit.
[Abstracter's note: Complete translation.]

Card 2/2

AUTHOR: Kovalenko, I,N.

TITLE: Determination of Correlation Functions of Some Processes As-
21-58-5-2/28
               sociated With Service Problems (Opredeleniye korrelyatsion-
               nykh funktsiy nekotorykh protsessov, svyazannykh s zadachami
               obsluzhivaniya)

ABSTRACT: The author analyzes a problem of determining the correlation
               functions of some processes in power consumption by a number
               of consuming mechanisms. The law of this power consumption
               can be considered as a stochastic process generated by a se-
               quence of independent random quantities. The author generali-
               zes one of the Ye.B. Dynkin theorems [Ref 2] and determines
               an expression for the correlation function of the process.
               This problem was set and its solution was supervised by
               B.V. Gnedenko, Member of the AS UkrSSR.
               There are 2 Soviet references.

ASSOCIATION: Institut matematiki AN UkrSSR (Institute of Mathematics of
Card 1/2   the AS UkrSSR)

21-58-5-2/28

Determination of Correlation Functions of Some Processes Associated With Service Problems

PRESENTED: By Members of the AS UkrSSR, B.V. Gnedenko

SUBMITTED: January 21, 1958

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

1. Hydroelectric power systems--Statistical analysis

Card 2/2

KOVALENKO, I.N. (Kiyev)

One class of optimal resolving functions for a binomial family of distributions. Tecr.verofat. i ee prim. 4 no.1:101-105 '59.

(MIRA 12:3)

(Samplings (Statistics))

KOVALENKO, I. N.

PHASE I BOOK EXPLOITATION   SOV/3981

Trudy Vsesoyuznogo soveshchaniya po teorii veroyatnostey i matematicheskoy statistike, Yerevan, 1958

Trudy Vsesoyuznogo soveshchaniya po teorii veroyatnostey i matematicheskoy statistike, Yerevan, 19-25 sentyabrya 1958 g. (All-Union Conference on the Theory of Probability and Mathematical Statistics. Held in Yerevan 19-25 September, 1958. Transactions) Yerevan, Izd-vo AN ASSR, 1960. 291 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk Armyanskoy SSR.

Editorial Staff: G.A. Ambartsumyan, B.V. Gnedenko, Yu.A. Rozanov, Yu.V. Linnik and S. Kh. Tumanyan; Ed. of Publishing House: A.G. Sikmni, Tech. Ed.: M.A. Kaplanyan.

PURPOSE: The book is intended for mathematicians.

COVERAGE: The book contains 41 articles submitted to the Conference and dealing with the theory of probability and mathematical statistics. Some of the articles are the theses read at the Conference and edited for publication, while others outline the theses of papers which appeared or are scheduled to appear, wholly or in part, in other publications...

[Several lines illegible]

Sarmanov, O.V. Asymptotic Cardinality of Some Nonparametric Criteria Concerning Displacement. (Theses)   98

Kruger, A.A. New Results Concerning Independent Statistics. (Theses)   101

Sheluginskiy, O.V. On the Theory of the Method of Least Squares When Weights are Unknown   103

Amartsumyan, G.A. On Quantity of Information About an Unknown Probability in the Scheme of Bernoulli's Experiments   106

Tumanyan, S.Kh. On the Statistical Criterion, x^2, as Applied to the Problem of Two Samples   112

Ambartsumyan, V.A. On Fluctuations in the Visible Distribution of Stars   121

Post, S.M. On One Problem in the Theory of Mass Service   139

[illegible] On the Restoration of Additive Type of Distribution by [illegible] Number of Independent Observations   115

Klass, D.M. Random Quantities of Biconnect Semigroups. (Theses)   143

Nadilyan, I.P., Yu.V. Linnik and A.I. Sholatskih. Some New Results in the Probabilistic Theory of Numbers, and Simulation of Brownian Motion   160

Fabrikov, B.L., B.I. Tsirlin, Kharkis, and L.S. Ryabukov. Approximate Computation of the Carrying Capacity of Radio Channels with Random Parameters   162

Kovalenko, I.N. Distribution of the Number, X, of Defective Products   168

Darkh, L.A. On Theoretical Informational Approach to the Theory of Special Instruments   172

Rumonsky, I.B. On Probability Problems Leading to Dynamic Programming   157

                                                                            206

Card 6/8

KOVALENKO, I.N. (Kiev)

Limit distribution of the first jump. Teor. veroiat. i ee
prim. 5 no. 4:469-472 '60.   (MIRA 13:12)
                        (Distribution (Probabilities))

16.6100 (also 1031)

AUTHOR: Kovalenko, I.N.

TITLE: Investigation of a Multilinear System of Service With Queues
and a Limited Stay in the System

TEXT: Given a service system with n lines. The system contains a
Poisson's stationary flow of claims with the parameter λ . If during the
arrival of the claims there are free lines then the service is carried
out immediately. The necessary time of service has an exponential
distribution with the mean $1/\mu$. If during the arrival of the claims
all lines are busy then there appear queues. A line which has become free
serves at first the claim which arrived at first. If for a claim the
waiting time + service time is greater than τ then the claim leaves the
system without being served to the end.
The described system is investigated with the aid of the n-dimensional
random process $\xi(t) = \{\xi_1(t), \xi_2(t),\dots \xi_n(t)\}$, where $\xi_i(t) = 0$
if in the moment t the i-th line is free ; $\xi_i(t)$ is the time from the
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Investigation of a Multilinear System of Service With Queues and a
Limited Stay in the System

moment t till the moment when the i-th line becomes free. It is stated
that $\xi(t)$ is a Markov process where $P\left\{\xi_i(t) \leqslant \tau, \ 0 < t < \infty\right\} = 1$, and
there exists an ergodic stationary distribution for it. Let $\xi_i(0) = w_i$,
$i = 1,..,n$. Let $x = \left\{x_1,.., x_n\right\}$; $0 \leq x_i \leq \tau$, $x_{ij} > 0$; $1 \leq j \leq k$; $x_i = 0$,
$i \neq i_j$, $1 \leq j \leq k$. Let $t > \max\left\{w_i\right\}$ be a fixed moment. Let u_j be the moment
of the arrival of the claim S_j which satisfies the following conditions :
1. S_j arrives before the moment t ; 2. S_j is served in the line i_j ;
3. Among all claims which satisfy 1. and 2., S_j has arrived last. Let
v_j be the time of service for S_j. For $u_j = u_j^0$, $v_j = v_j^0$ let $\xi(t) =$
$= \left\{ \dots x_{j_1}, \ \dots, \ x_{j_2}, \dots, \ x_{j_k} \dots\right\}$. In the general case there holds the
inequality

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Investigation of a Multilinear System of Service With Queues and a
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$$P\left\{x_1 = 0, \, i \neq i_j, \, 1 \leq j \leq k; \quad x_{i_j} \leq \xi_{i_j}(t) < x_{i_j} + \Delta\right\} \leq$$

$$(3) \quad \leq \max_{0 \leq \epsilon_j \leq 1} \, \max_{z_1,\ldots,z_k} \, P\left\{a_j \leq \epsilon_j u_j + (1 - \epsilon_j)v_j < z_1 + \Delta, \, 1 \leq j \leq k\right\} \leq$$

$$\leq \max\left\{\lambda^k, \mu^k\right\} \Delta^k \quad .$$

It shows that the considered measure of probability is absolutely
continuous on the k-dimensional manifolds

$$\left\{0 < x_{i_j} < \tau \, , \, 1 \leq j \leq k; \, x_i = 0 \, , \, i \neq i_j \, , \, 1 \leq j \leq k\right\}$$

so that there exist functions $p_k(i_1,\ldots, i_k; x_1,\ldots, x_k)$ so that

$$\lim_{t \to \infty} P\left\{\xi_{i_j}(t) > a_j \, , \, 1 \leq j \leq k; \, \xi_i(t) = 0 \, , \, i \neq i_j \, , \, 1 \leq j \leq k\right\} =$$

$$= \int_{a_1}^{\infty} \cdots \int_{a_k}^{\infty} p_k(i_1,\ldots, i_k; x_1,\ldots, x_k) dx_1 \ldots dx_k \quad (a_j \geq 0)$$

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Investigation of a Multilinear System of Service With Queues and a
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Let $p_k(x_1,\ldots, x_k) = p_k(i_1,\ldots, i_k ; x_1,\ldots, x_k)$. Under the assumption
that the distribution of $\xi(t)$ is stationary it is stated that the
distribution of limits of the process is described by the differential
equations

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C111/C222

Investigation of a Multilinear System of Service With Queues and a Limited
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$$\lambda p_0 = n p_1(0),$$

$$\frac{\partial p_k}{\partial x_1} + \ldots + \frac{\partial p_k}{\partial x_k} - \lambda p_k + (n-k)\, p_{k+1}(x_1, \ldots, x_k, 0) +$$

$$+ \frac{\lambda \mu}{n-k+1} \sum_{i=0}^{h} p_{k-1}(x_1, \ldots, x_{i-1}, x_{i+1}, \ldots, x_k)\, e^{-\nu x_i} = 0$$

$$(1 \leqslant k \leqslant n-1,\ 0 < x_i < \tau),$$

$$\frac{\partial p_n}{\partial x_1} + \ldots + \frac{\partial p_n}{\partial x_n} - \lambda p_n + \lambda \mu \sum_{i=1}^{n} \int_0^{\min(x_i)} p_n(x_1, \ldots, x_{i-1}, z,$$

$$x_{i+1}, \ldots, x_n)\, e^{-\nu(x_i - z)}\, dz +$$

$$+ \lambda \mu \sum_{i=1}^{n} e^{-\mu x_i} p_{n-1}(x_1, \ldots, x_{i-1}, x_{i+1}, \ldots, x_n) = 0\ \ (0 < x_i < \tau).$$

$$(4)$$

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with the boundary conditions

$$p_k(\tau, x_2, \ldots, x_k) = \frac{\lambda}{n-k+1} \, p_{k-1}(x_2, \ldots, x_k) e^{-\mu\tau} \quad (1 \le k \le n-1)$$

$$(5) \quad \left\{ \begin{array}{l} p_n(\tau, x_2, \ldots, x_n) = \lambda \, p_{n-1}(x_2, \ldots, x_n) e^{-\mu\tau} + \\ \\ \qquad + \displaystyle\int_0^{\min x_2, \ldots, x_n} p_n(z, x_2, \ldots, x_n) e^{-\mu(\tau-z)} dz \end{array} \right.$$

(it means $p_k(\ldots, \tau, \ldots) = p_k(\ldots, \tau - 0, \ldots)$).

The solution of (4)-(5) reads

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Investigation of a Multilinear System of Service With Queues and a
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$$p_k(x_1,\ldots,x_k) = p_0 \frac{\lambda'}{n!} \frac{(n-k)!}{n!} \exp\left\{-\mu \sum_{i=1} x_i\right\}$$

$$(1 \leqslant k \leqslant n-1, \; 0 \leqslant x_i \leqslant \tau)$$

$$p_n(x_1,\ldots,x_n) = p_0 \frac{\lambda^n}{n!} \exp\left\{-\mu \sum_{i=1}^{n} x_i + \lambda \min_{1\leqslant i\leqslant n}\{x_i\}\right\}$$

$$(0 \leqslant x_i \leqslant \tau).$$

(6)

The different characteristics of the considered service system are
obtained from (6), e.g. the distribution of busy lines, the probability
of a complete engagement of the system, the distribution of the waiting
time, the probability of a complete service. The author points to an
error in the formulas of Barrer (Ref. 1).

Card 7/8

88307

S/041/60/012/004/008/011
C111/C222

Investigation of a Multilinear System of Service With Queues and a
Limited Stay in the System

The author mentions B.A. Sevast'yanov. He thanks B.V. Gnedenko, Academician
of the Academy of Sciences of the Ukrainian SSR.
There are 3 references : 1 Soviet and 2 American.

[Abstracter's note: (Ref. 1) concerns D.Y. Barrer, Operation Research,
1957, No. 5]

SUBMITTED: March 10, 1960

Card 8/8

16.6100

25018

S/052/61/006/002/005/006
C111/C222

AUTHOR: Kovalenko, I.N.

TITLE: Some queuing problems with restrictions

PERIODICAL: Teoriya veroyatnostey i yeye primeneniye, v.6. no.2, 1961,
222 - 228

TEXT: The present paper was composed by a number of problems treated in
the section for probability calculus and mathematical statistics of the
Institute of Mathematics of the Academy of Sciences Ukr. SSR under the
leading of B.V. Gnedenko. The author considers an extensive queuing
scheme for the case of a single server and Poisson input. The simple
queuing, a system with losses and a system with restrictions on waiting
time or spending time are exceptional cases of this scheme.
Let the time necessary for the service be a random term η with the
distribution function $H(x)$; $H(+0) = 0$. Every customer may leave the
system after a complete service or still before the beginning of the
service depending 1) on the fact when the preceding customers leave the
system, 2) on η , 3) on the following restrictions :
1. If the system is occupied then the customer may waite that it be-
comes free for a time which is not greater than a random term γ_1

Card 1/4

with the distribution function $B(x)$.

2. If after a waiting time γ the service begins then the customer can wait for the end of the service not longer than a random time γ_2, where

$$P\left\{ \gamma_2 < x \mid \gamma = y \right\} = G_y(x) \quad ; \quad G_y(+0) = 0 \ , \ y \geqslant 0$$

(let $G_y(x)$ be measurable in y for every x). The service of the customer arriving in the moment t begins immediately (if the system is free) or in the moment s if all customers arrived before the moment t have leaved the system. Let the influx of the customers depend on a parameter λ.

Thus the scheme depends on λ, $H(x)$, $B(x)$, $G_y(x)$. For $B(x) = 0$, $G_y(x) \equiv 0$ e.g. one obtains a simple queuing.

Let $F(t,x) = P\left\{ \xi(t) < x \right\}$, where $\xi(t)$ is a random process, where $\xi(t) = 0$ if the system is free in the moment t, and $\xi(t) =$ the time from the moment t up to the moment where all customers leave the system if in the moment t the system was not free.

Theorem 1 : If the time of the stay in the system is bounded then for

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Some queuing problems 25018 ....

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$t \to \infty$ there exists a unique stationary distribution $F(x) = \lim F(t,x)$, where the convergence is uniformly exponential with respect to the limit value.

Let the process $\xi(t)$ have a stationary initial distribution then $F(t,x) = F(x)$ holds for all $t \geq 0$.

Theorem 2 : The distribution function $F(x)$ has a jump in the point $x = 0$ and is absolutely continuous for $x > 0$. The derivative $p(x) = F'(x)$ is defined almost everywhere as the single integrable solution of the equation

$$p(x) - \lambda \int_0^x \left[1 - B(y)\right] \left[1 - G_y(x - y)\right] \left[1 - H(x - y)\right] p(y)dy =$$

$$= \lambda F(0) \left[1 - G_o(x)\right] \left[1 - H(x)\right] \qquad (3)$$

with the normalization

$$F(0) + \int_0^T p(t)dt = 1 \ . \qquad (4)$$

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Some queuing problems 25018
....

S/052/61/006/002/005/006
C111/C222

It is shown that different characteristics of the service (e.g. the distribution function of the real waiting-time) can be expressed by $F(x)$. Some examples are considered. The author mentions S.M. Brodi. He thanks B.V. Gnedenko and V.S. Koroljuk for the theme and advices. There are 4 Soviet-bloc and 2 non-Soviet-bloc references. The references to the two English-language publications read as follows : D.Y. Barrer, Queuing with impatient customers and ordered service, Operations Res., 5 (1957), 650 - 656, J.L. Doob, Veroyatnostnye protsessy (Stochastical processes), M., I'1, 1956.

SUBMITTED: October 7, 1959

Card 4/4

45293

S/562/62/000/011/008/008
E140/E135

AUTHOR: Kovalenko, I. N.

TITLE: The conditions for the probabilities of the states of a
            queuing system to be independent of the form of time
            distribution of service

SOURCE: Akademiya nauk SSSR. Institut problem peredachi
            informatsii. Problemy peredachi informatsii. no.11.
            1962. Voprosy teorii pererabotki i raspredeleniya
            informatsii. 147-151.

TEXT: The problem is studied in terms of the theory of
reliability, since applications are intended in this field. The
conditions of the problem are as follows. A system is assumed
consisting of s groups of elements; the j-th group contains a
finite number N_j of elements; the elements can fault according
to the following rule: if at time t there are k_j elements
faulted in the j-th group, the probability that one further
element will fail in that group during the small time interval Δt
is proportional to that interval, while the probability that two

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The conditions for the probabilities... S/562/62/000/011/008/008
E140/E135

or more will fail in the j-th group is infinitesimal. There is
a large number of service mechanisms, so that repair of each
failed element is started immediately. The time for repairing the
ξ_j-th element in the j-th group is a random quantity with the
distribution:

$$\phi_j(x) = P\left\{\xi_j \geqslant x\right\}.$$

Let the mathematical expectation of the random quantity ξ_j be
$\tau_j < \infty$, and denote by $p(k_j,t)$ the probability of the
event $(k_1,\ldots,k_s,t)$; then, if for $t \to \infty$ the limit of $p(k_j,t)$
which we denote by $p(k_j)$ exists and is independent of the initial
conditions, we have the following theorem:
For all $k_1,\ldots,k_s$, for there to exist the $p(k_j)$, defined by the
set of parameters $\lambda_j(k_1,\ldots,k_s)$ (the probability for exactly one
further fault in the j-th group in the presence of k_j faults
for unit time) and $\{\tau_j\}$, independently of the form of $\{\phi_j\}$,

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The conditions for the probabilities.. S/562/62/000/011/008/008
E140/E135

it is necessary and sufficient that for any set of k_j and any two sets

$$\{i_1, \ldots, i_{k_1 + \ldots + k_s}\} \quad \{i'_1, \ldots, i'_{k_1 + \ldots + k_s}\}$$

in each of which exactly k elements are equal to ν, $1 \leq \nu \leq s$ the equality

$$\prod_{\ell=1}^{k_1 + \ldots + k_s} \lambda_{i_\ell} \left(\sum_{r=1}^{\ell-1} \delta_{1, i_m}, \ldots, \sum_{m=1}^{\ell-1} \delta_{s, i_m} \right) =$$

$$= \prod_{\ell=1}^{k_1 + \ldots + k_s} \lambda_{j_{\ell'}} \left(\sum_{m=1}^{\ell'-1} \delta_{1, i_{m'}}, \ldots, \sum_{m=1}^{\ell'-1} \delta_{s, i_{m'}} \right) \qquad (1)$$

be satisfied, where $\delta_{ij} = 1$ for $i = j$, $\delta_{ij} = 0$ for $i \neq j$.

Card 3/4

KOVALENKO I. N

Transactions of the Sixth Conference (Cont.)   SOV/6371

L-3505-65   EWT(d)/EWT(l)/EWP(b)/EWP(v)/T/EEC(b)-2/EWP(k)/EWP(h)/EWP(l)/EWA(h)
Pn-4/Ps-4/Pq-4/Pl-4/Pq-4/ab/P m4

ACCESSION NR: AT5002487   8/2720/64/002/000/0194/0205

AUTHOR: Kovalenko, I. N.

TITLE: Some problems in the theory of reliability of complex systems

SOURCE: Kibernetiku - na sluzhbu kommunizmu, v. 2, 1964. Teoriya nadezhnosti i teoriya massovogo obsluzhivaniya (Theory of reliability and theory of mass service), 194-205

TOPIC TAGS: Markov process, reliability theory, mass service theory

ABSTRACT: A mathematical scheme for mass-service processes, proposed by the author earlier (same source, p. 352), is applied systematically to problems of reliability of complex systems.   A recurrence method is developed for determining the main characteristics of reliability, and is supplemented with a method for estimating the number of iterations necessary to ensure the specified accuracy of the results.   It is pointed out that present investigations of mass-service systems lack a unified approach leading to a universal algorithm for the definition of the main characteristics of the system.   The author's method is based on the

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L 2509.-65
ACCESSION NR: AT5002487

theory of the Markov processes. The subject headings are: Introduction. 1. Schematization of service systems. 2. Reduction of the problems of reliability theory to a general scheme of mass-service processes. 3. Use of recurrence formulas. 4. Estimate of the remainder terms. Orig. art. has: 25 formulas.

ASSOCIATION: None

SUBMITTED: 00   ENCL: 00   SUB CODE: IE, MA

NR REF SOV: 002   OTHER: 001

Card 2/2

ACCESSION NR: AP4044826   S/0280/64/000/004/0077/0080

AUTHOR: Kovalenko, I. N. (Moscow)

TITLE: The construction of highly complex Boolean functions using the Monte Carlo method

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 4, 1964, 77-80

TOPIC TAGS: Boolean function, Monte Carlo method, algebraic logic function algorithm, logical analysis, logic function

ABSTRACT: The paper discusses an algorithm, containing random elements, for constructing functions of the algebra of logic of many variables. It is based on the concept of the complexity of a Boolean function of many variables introduced by O.B. Lupanov (Problemy* kibernetiki, Fizmatgiz, 1963, No. 11). In the approach employed in this paper, a Boolean function $f(x_1, \ldots, x_n; \xi_1, \ldots, \xi_N)$ is assumed which has the property that if $\{\xi_i\}$ is considered to be a sequence of the following random quantities, $P\{\xi_i = 0\} = P\{\xi_i = 1\} = 1/2$, then, with sufficiently high probability, the function $f(x_1, \ldots, x_n; \xi_1, \ldots, \xi_N)$, as a function of $x_1, \ldots, x_n$, will have a sufficiently high complexity.

Card 1/2

VASIL'YEV, P.I.; KOVALENKO, I.N.

Remark on stationary strems of uniform events.
Ukr.mat.zhur. 16 no. 3:374-375 '64.   (MIRA 17:7)

L 44752-65
ACCESSION NR: AP5007245   8/0280/65/000/001/0014/0020

AUTHOR: Kovalenko, I. N. (Moscow)

TITLE: Some classes of complicated systems. Part 2

SOURCE: AN SSSR, Izvestiya, Tekhnicheskaya kibernetika, no. 1, 1965, 14-20

TOPIC TAGS: complicated system, complex system

ABSTRACT: This is a continuation of the author's investigation of the piecewise-
linear aggregate published earlier (Izv. AN SSSR, Tekhn. kibernetika, 1964,
no. 6). A class of functionals describing the system efficiency is introduced. A
transformation of coordinates that permits reducing an arbitrary piecewise-linear
aggregate to a "canonical" form is shown. The canonical form is defined by a
few parameters, one of which is linearly time-varied while others are piecewise-
constant. Simulation of a complicated system is considered, and the complexity
of reproducing the system functioning is quantitatively evaluated. Finally, the

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L 44757-65
ACCESSION NR: AP5007241

aggregate is considered as a converter of random process, and the characteristics
of the output process, when the input process meets certain conditions, are
examined; the properties preserved in passing the process through the aggregate
are indicated. Orig. art. has: 21 formulas.

ASSOCIATION: none

SUBMITTED: 13Nov64   ENCL: 00   SUB CODE: DP

NO REF SOV: 005   OTHER: 000

Card 2/

KOVALENKO, I.N. (Moskva)

Some classes of complex systems. Izv. AN SSSR. Tekh. kib. no.6:3-9 N-D '64.

(MIRA 18:3)

KOVALENKO, I.N.

Complexity of the representation of events in probability and
determinate finite automata. Kibernetika no.2:35-36 Mr-Ap '65.
(MIRA 18:5)

L 6360 65   EWT(d)   IJP(c)

ACCESSION NR: AP5016965   UR/0280/65/000/003/0003/0011

AUTHOR: Kovalenko, I. N. (Moscow)

TITLE: Some classes of complex systems. II

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 3, 1965, 3-11

TOPIC TAGS: sectionally linear system, complex system, ergodic theory,
Markov process, random process

ABSTRACT: General analytical methods are derived for the study of random pro-
cesses connected with the operation of sectionally linear complex systems de-
fined in the previous papers of the present series (Izv. AN SSSR, Tekhnicheskaya
kibernetika, 1964, no. 6; Ibid., 1965, no. 1). The operating system is associated
with an enclosed Markov circuit (see, D. Kendall, Stochastic processes encounter-
ed in the theory of recurrences and their analysis by means of enclosed
Markovian circuits, Sb. perev. "Matematika, Izd-vo inostr. lit., 1959, 3:5) (the
properties of which are subsequently investigated. A class of distributions is
specified comprising the distributions of the processes under consideration.
The article concludes with the ergodic theory of sectionally linear Markov
processes and presents the proof of the ergodic theorem. Orig. art. has: 31
formulas.

Card: 1/2

L-63804-6

ACCESSION NR: AP5016965

ASSOCIATION: none

SUBMITTED: 26Feb65

NO REF SOV: 003

ENCL: 00   SUB CODE: MA

OTHER: 003

Card 2/2

L 5300 S   JR(d)/T   LJP(

ACCESSION NR: AP5010566

UR/0020/65/161/003/0517/0519

AUTHOR: Kovalenko, I. N.

TITLE: Limit theorem for a determinant in the class of Boolean functions

SOURCE: AN SSSR, Doklady, v. 161, no. 3, 1965, 517-519

TOPIC TAGS: probability, linear system

ABSTRACT: The author proved the following theorem: Let $\{a_{ij}\}$, $1 \leq i$, $j \leq n$ be independent random variables with $P\{a_{ij} = 1\} = p_{ij} = 1 - P\{a_{ij} = 0\}$. If

$$0 < \delta \leq p_{ij} \leq 1 - \delta, \quad n \geq 1, \quad 1 \leq i, j \leq n, \qquad (1)$$

then

$$\lim_{n \to \infty} \pi_n = \prod (1 - 2^{-k}) \approx 0.29, \qquad (2)$$

Here $\Delta_n = \det [a_{ij}]$, and $\pi_n = P\{\Delta_n = 1\}$. This result is useful because the system

$$\sum_{i=1}^{n} a_{ij} = b_i, \quad 1 \leq i \leq n, \qquad (3)$$

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L 53008-65

ACCESSION NR: AP5010960

is uniquely solvable in the class of Boolean functions if and only if $\Delta_n = 1$. Orig. art. has: 7 formulas.

ASSOCIATION: none

SUBMITTED: 2 Sep64   ENCL: 00   SUB CODE: MA

NO REF SOV: 100   OTHER: 000

Card 2/2

VEKSLER, V.I.; MARKOVICH, A.V.; KOVALENKO, L.N.

Aminodeoxy carbohydrates, derivatives of tetrasubstituted
ammonium with long-chain alkyl radicals. Zhur. ob. khim.
35 no.8:1504-1505 Ag '65.   (MIRA 18:8)

1. Leningradskiy institut sovetskoy torgovli.

L 16153-66   EWT(d)   I.P(c)

ACC NR: AP5026974   SOURCE CODE: UR/0020/65/164/005/0979/0981

AUTHOR: Kovalenko, I. N.

ORG: none

TITLE: Regenerating the characteristics of a system by observing the output flow

SOURCE: AN SSSR. Doklady, v. 164, no. 5, 979-981

TOPIC TAGS: operations research, industrial condition

ABSTRACT: According to P. J. Burke, (Operations Res., 4 (1956)) the output flow
was elementary in an unilinear system of mass maintenance if the duration of
maintenance was distributed according to the exponential law. It followed that
in such a case it was impossible to find the mathematical expectation of
maintenance duration over the entire set of multidimensional distributions which
characterized the output flow. Such was not the case if the load of the system
was less than the critical load and if the law of the maintenance duration
distribution was other than exponential. Under these assumptions it was shown
that the maintenance duration distribution could be uniquely regenerated by means

Card 1/2   UDC: 51 : 330.115

L 16153-66

ACC NR: AP5026974   0

of joint distribution of two consecutive maintence intervals. Orig. art. has:
8 formulas.

SUB CODE: 12 / SUBM DATE: 08Mar65/ ORIG REF: 002/ OTH REF: 003

Card 2/2

KOVALENKO, I.P., polkovnik meditsinskoy sluzhby

Mechanized field laundry. Voen.-med. zhur. no.4:79-82 Ap '56.
(LAUNDRIES, MILITARY)   (MLRA 9:9)

ZABORENKO, K.B.; BABESHKIN, A.M.; KOVALENKO, I.V.

Emanation and leaching of radium isotopes from monazite. Radio-
khimiia 1 no.6:738-741 '59.   (MIRA 13:4)
              (Radium--Isotopes) (Monazite)

Kovalenko, I.V.

KOVALENKO, I.V., kandidat meditsinskikh nauk; PINCHUK, N.V.

Studying the morbidity of the population according to data on the
number of visits. Sov. zdrav. 15 no.4:31-35 Jl-Ag '56. (MLRA 9:9)

1. Iz kafedry organizatsii zdravookhraneniya (zav. - prof. B.M.
Shklyar) Dnepropetrovskogo meditsinskogo instituta (dir. - dotsent
D.P.Chukhriyenko)
      (VITAL STATISTICS,
         morbidity calculation (Rus))

KOVALENKO, I.V., kand.med.nauk; PINCHUK, N.V. (Dnepropetrovsk)

Public help in the work of a hospital. Sov.zdrav. 21 no.7:20-22 '62.
(MIRA 15:8)
1. Iz 4-y gorodskoy bol'nitsy (glavnyy vrach Ye.N.Fedotov)
Dnepropetrovska.
(DNEPROPETROVSK.—HOSPITALS)

KOVALENKO, K. A.

4557.   KOVALENKO, K. A. ustroystvo dlya mekhanicheskoy podachi dosok na tsirkul'nuyu pilu.-/t. b. monesova. mekhanizm dlya vyrabotki steklyannykh ugol'nikov. m./.1954. 3 s. s chert. 26 sm. (glavstroysteklo MPSM SSSR. obmen opytom v stekol'noy prom-sti inform. listok old. tekhn. informatsii tresta ⟨ORGSTEKLO⟩ no. 14). 350 ekz. bespl. sost. ukazany v kontse teksta. /54-15653zh/

674.053/666.17.05

SO: Knizhnaya Letopis', Vol. 1, 1956

MATSKIN, L.A.; KOVALENKO, K.I.; BABUKOV, V.G.; KONSTANTINOV, N.N.;
PONOMAREV, G.V.; FAL'CHIKOV, G.N.; PELENICHKO, L.G.; SHAMARDIN,
V.M.; GLADKOV, A.A.; BRILLIANT, S.G.; SHEVCHUK, V.Ya.; SOSHCHEN-
KO, Ye.M.; ALEKSANDROV, A.M.; BUNCHUK, V.A.; KRUPENIK, P.I.;
MAYEVSKIY, V.Ya.; YELSHIN, K.V.; GAK, Kh.A.; POTAPOV, G.M.;
KARDASH, I.M.; SHEPURO, S.I.; KAPLAN, S.A.; SELIVANOV, T.I.;
YEREMENKO, N.Ya.; ZHUZH, A.D.; USTINOV, A.A.; GIRKIN, G.M.;
VOLOBUYEV, F.P.; CHERNYAK, I.L., nauchnyy red.; DESHALYT, M.G.,
vedushchiy red.; GENNAD'YEVA, I.M., tekhn.red.

[Combating losses of petroleum and petroleum products; materials
of the All-Union Conference on Means of Combating Losses of
Petroleum and Petroleum Products] Bor'ba s poteriami nefti i
nefteproduktov; po materialam Vsesoiuznogo soveshchaniia po bor'be
s poteriami nefti i nefteproduktov. Leningrad, Gos.nauchno-tekhn.
izd-vo neft. i gorno-toplivnoi lit-ry, 1959. 157 p. (MIRA 13:2)

1. Nauchno-tekhnicheskoye obshchestvo neftyanoy i gazovoy pro-
myshlennosti.
                (Petroleum industry)

KOVALENKO, Konstantin Iosifovich; MURAV'YEV, I.M., red.; PETROVA, Ye.A., ved. red.

[New methods for development and petroleum production]
Novye metody razrabotki i nefteotdacha plastov. Moskva,
Nedra, 1964. 157 p.   (MIRA 18:1)

KOVALENKO, K.I.

Casinghead gas and its use on oil fields: Bashkir A.S.S.R.
Neft. khoz. 40 no.12:48-54 D '62.   (MIRA 16:7)

(Bashkiria)

GALONSKIY, P.P.; KOVALENKO, K.I.; KUVYKIN, S.I.; MINGAREYEV, R.Sh.;
MURAVLENKO, V.I.; OBNOSOV, A.D.; SHASHIN, V.D.; SHMAREV, A.T.

Volga-Ural region is one of the largest petroleum bases of
the country.   Neft. khoz. 42 no.9/10:56-64 S-O '64.

(MIRA 17:12)

KOVALENKO, K.I. MARSHASIN, I.L.; BEREZIN, V.M.; PANTELEYEV, V.G.

Increasing the oil yield of beds by injecting carbonated water.
Neft. khoz. 42 no.11:6-9 N '64   (MIRA 18:2)

KOVALENKO, K.I.; BELOZEROV, G.I.

Reserves for increasing petroleum production in Bashkir fields.
Neft. khoz. 43 no.9:22-27 S '65.

(MIRA 18:10)

Kovalenko, K.N.

3-3-10/40

AUTHORS: Sibiryakov, A.P., Dotsent, and Kovalenko, K.N., Dotsent

TITLE: Problems of Instruction in "Machine Parts" (Voprosy prepo-
             davaniya kursa "Detali Mashin")

PERIODICAL: Vestnik Vysshey Shkoly, March 1957, # 3, p 48-51 (USSR)

ABSTRACT: The authors express their dissatisfaction with the organi-
             zation and method of instructing the subject "Machine Parts".
             They point out that the various teaching plans for this sub-
             ject, vary from 14 to 102 hours, and that there is a lack
             of correlation between the number of hours allowed for lec-
             tures and practical training. In the authors' opinion the
             number of hours for both types of training should correspond.
             They also say that the course extends over an excessive
             number of semesters and claim that the teaching plans are
             changed almost every year while the programs remain the same
             continuously. They ask that instructors be assigned to lead
             student practical training, that a manual of instruction on
Card 1/2   "Machine Parts" be prepared, and they complain about the
             lack of training aids for instructional purposes.

KOVALENKO, K. N.

K. N. Kovalenko and N. A. Trifonov - "Physico-chemical analysis of the systems pyridineethyl aniline and quinoline-ethyl aniline. I. Viscosity, density, and refractive index." (p. 131)
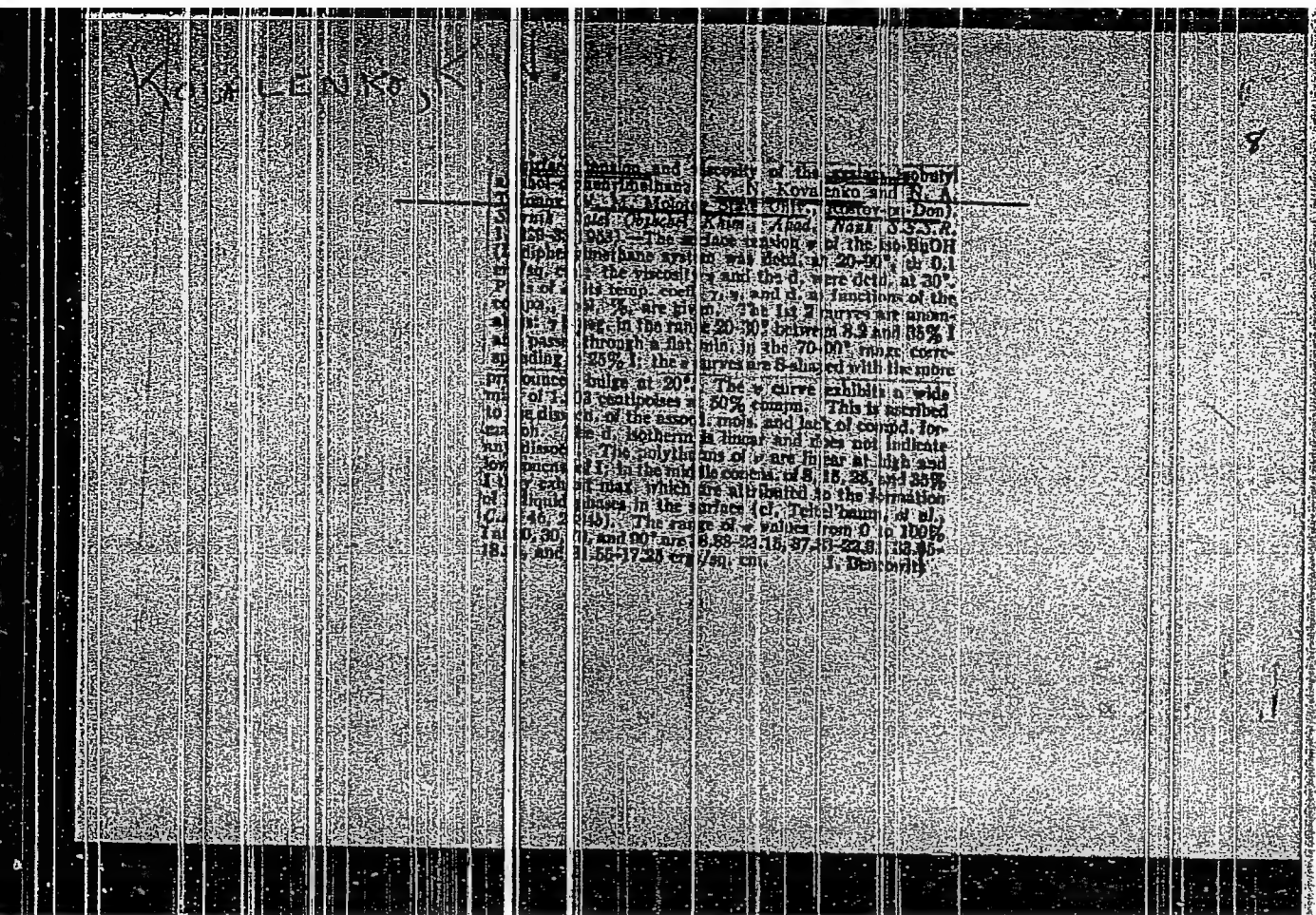
SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1940, Vol. 20, No. 7

Surface tension and refractive index of the ternary system: water-acetic anhydride-acetone. N. A. Trifonov and K. N. Koralenko. Bull. acad. sci. U.R.S.S., Classe sci. chim. 1947, 113-52(in Russian).—1) In the binary system Ac_2O-Me_2CO, the surface tension σ is a linear function of the compn., contrary to the expected curvilinear isotherms (on the basis of the dipole moments): e.g. at 25, 50, 70 mole % Me_2CO, at 0°, $\sigma = 33.01$, 30.61, 28.43 dyne/cm.; at 25°, 30.00, 27.62, 26.25; at 40°, 38.10, 35.82, 32.53. (2) For the ternary system $H_2O-Ac_2O-Me_2CO$, σ is given at 25° along isoconcentrates corresponding to 10, 25, 50, and 75 mole % Me_2CO and $Ac_2O:H_2O = 1:9, 1:3, 3:2, 1:1, 3:1,$ and 4:1 moles; selected data: Me_2CO 25 mole %, $\sigma = 31.05$, 30.10, 28.33, 27.61, 27.77, 28.86; Me_2CO 50, $\sigma = 27.34$, 27.50, 26.68, 26.61, 26.76, 27.18; Me_2CO 75, $\sigma = 24.94$, 25.10, 24.97, 24.90, 25.17, 25.17; for the derived system $AcOH-Me_2CO$ at 25°, at 0, 25, 50, 75, and 100 mole % Me_2CO, $\sigma = 17.23$, 27.50, 26.61, 24.90, and 23.06. Thus, contrary to previous findings (Hammik and Andrews, C.A. 25, 3493) there is a distinct max. (at about 11 mole % Me_2CO) which can only be due to chem. interaction. The isothermal σ surface of the ternary system $H_2O-Ac_2O-Me_2CO$ at 25° consists of two surfaces intersecting along a singular synclinal line representing the system $AcOH-Me_2CO$. (3) The isothermal ternary σ surface of $H_2O-AcOH-Me_2CO$ at 25° slopes steeply from H_2O down towards both Me_2CO and $AcOH$; on this surface, the

isoconcentrates corresponding to 10, 25, 50, and 75 mole % Me_2CO pass through max. shifted to the H_2O-Me_2CO side of the triangle. Selected data: $H_2O:AcOH = 4:1$, 1:1, 1:4 moles, Me_2CO 10 mole %, $\sigma = 34.68$, 32.15, 29.0); Me_2CO 25, $\sigma = 31.05$, 30.10, 28.32; Me_2CO 50, $\sigma = 27.39$, 27.50, 26.93; Me_2CO 75, $\sigma = 25.24$, 25.10, 24.97. (4) In analogy with the $H_2O-Ac_2O-Me_2CO$ system, the isothermal ternary σ surface at 25° (T. and Khaisova, Sbornik Referatov VI Mendeleesk. S'ezda 2, 98(1932)) of $CH_2:CHCH_2NCS$-piperidine-PhMe consists of two sheets, convex to the plane of the base triangle, and intersecting in a singular anticlinal line corresponding to formation of allylpiperidylthiourea. In contrast thereto, the σ surface of the system C_6H_5-$PhMe-m-C_6H_4Me_2$ (T. and Taikov, Byull. Vsesoyuz.-Khim. Obshchestva im. D. I. Mendeleeva 1940, 1-2) is monotonic, slightly convex to the triangle plane. (5) Refractive indexes n_D were detd. for all 3 binary systems at 20° and 40°. Selected data: H_2O-Ac_2O, 20, 40, 50, 60, 80 mole % H_2O, $n_D = 1.38271$, 1.37508, 1.37243 (min.), 1.37645, 1.37272, $n_D = 1.37597$, 1.36564, 1.36610 (min.), 1.36089, 1.35712; H_2O-Me_2CO, 20, 60, 80 mole %, $n_D = 1.36183$, 1.36563 (max.), 1.35890, $n_D = 1.35239$, 1.35749 (max.), 1.35254; Me_2CO-Ac_2O, 20, 60, 80 mole % Me_2CO, $n_D = 1.36491$, 1.37434, 1.36720, $n_D = 1.37711$, 1.36585, 1.35819. In the latter binary system, the curves, concave to the axis of compn., may indicate either chem. interaction or assocn. of components. (6) For the ternary system $H_2O-Ac_2O-Me_2CO$, σ is given at 25° along isoconcentrates corresponding to 20, 40, 60, and 80 mole % Me_2CO, and $H_2O:Ac_2O = 4:1, 3:2, 1:1, 2:3, 1:4$ moles. Selected data: Me_2CO 40 mole %, $\sigma =$

Physicochemical analysis of the systems pyridine-N-ethylaniline and quinoline-N-ethylaniline. I. Viscosity, specific weight, and refractive index. K. N. Kovalenko and N. A. Trifonov (Rostov State Univ.). Zhur. Obshchei Khim. (J. Gen. Chem.) 20, 1131-8(1950); J. Gen. Chem. U.S.S.R. 20, 1175-83(1950).—Measurements of η and d. for the systems pyridine (I)-N-ethylaniline (II) and quinoline (III)-N-ethylaniline were made at 0, 20, and 70°, and n was measured at 20 and 40° for the former system and at 20° for the latter. The viscosity η-concn. (mole percent) curves in the system I-II are slightly concave towards the concn. axis, the curvature increasing with decreasing temp. The d.-concn. curves are less concave, and the curvature increase with increasing temp.; the nη-concn. and nη-concn. curves are concave and essentially parallel. At 20°, e.g., values of mole percent I, η (centipoises), d., and n are, resp.: 0, 2.170, 0.9421, 1.5560; 25, 2.030, 0.9657, 1.5487; 50, 1.742, 0.9718, 1.5402; 75, 1.379, 0.9772, 1.5370; 100, 0.968, 0.9925, 1.5082. The deviation of the η-concn. curve from linearity is attributed to the formation of a chem. compd. that is largely dissocd. at temps. of 0° and above. In the system III-II, the η-concn. curve shows a sharp max. at 0° at a concn. of II of 30-35 mole %, which becomes progressively broader and less pronounced as the temp. is increased. The d.-concn. curves are very slightly concave towards the concn. axis at all temps.; and the n-concn. curve at 20° is a straight line. At 20° values of mole per cent III, η (centipoises), d., and n are, resp.: 25, 3.025, 0.9031, 1.5736; 51, 3.854, 1.0290, 1.5121; 65, 4.083, 1.0510, —; 70, 4.102, 1.0569, —; 75, 4.067, 1.0616, 1.5085; 100, 3.865, 1.0629, 1.6360. The max. in the η-concn. curves is also attributed to chem.-compd. formation between the constituents of the system.   Arild J. Miller

Surface tension and viscosity of the isopropyl alcohol–di... K. N. Kovalenko and N. A. ... (Rostov-na-Don). Uch. Zap. Molot... ... Gos. Univ... Obshchei Khim... Akad. Nauk S.S.S.R. ... 93). — The surface tension of the iso-BuOH–diphenylmethane system was held at 20–90°, the ... the viscosity and the d. were detd. at 30°. ... its temp. coeff. ..., and d. as functions of the ... % are given. The ... curves are anom. ... in the range 20–70° between 8.9 and 86% ... pass through a flat min. in the 70–90° range, corre-... the curves are S-shaped with the more ... bulge at 20°. The ... curve exhibits a wide ... of 1 ... centipoises at 50% compn. This is ascribed ... dissocn. of the assocd. mols. and lack of compd. for-... d. isotherm is linear and does not indicate ... The solutions of ... are linear at ... and ... in the middle concns. of 8, 15, 25, and 85% ... of max. which are attributed to the formation ... liquid phases in the surface (cf. Teitel'baum et al., ... 45). The range of ... values from 0 to 100% ... 0, 30, ... and 90° are 8.58–22.18, 97.43–22.8, ... 18. ... and 21.55–17.28 erg/sq. cm. — J. Denovan

KOVALENKO, K.N.; TRIFONOV, N.A.

Surface tension of binary liquid systems at the inversion temperature. Zhur. Fiz. Khim. 27, 527-30 '53.
(CA 47 no.21:10582 '53)   (MLRA 6:5)

1. V.M. Molotov State Univ., Rostov-on-Don.

KOVALENKO, K N

USSR/Chemistry - Analysis

Card 1/1   Pub. 147 - 18/27

Authors   : Kovalenko, K.N., Trifonov, N.A.

Title   : Physico-chemical analysis of systems formed by diphenylamine with quinoline and aniline (fusibility, density and viscosity).

Periodical : Zhur. fiz. khim. 28/2, 312-316, Feb 1954

Abstract   : The physico-chemical properties of the diphenylamine-quinoline system were determined on the basis of its fusibility, density and viscosity charac- teristics. It was established that a chemical reaction takes place between the individual components of the system which results in the formation of compounds with a ratio of 1:1 which are later thermally dissociated in liquid phase. Analysis made of the diphenylamine-aniline system showed no traces of any chemical reaction between the components of this system and the component ratio was found to be ideal. Twelve references: 11-USSR and 1-German (1923-1950). Tables.

Institution : The V.M. Molotov State University, Rostov

Submitted : April 30, 1953

Kovalenko, K.N.

USSR/ Physical Chemistry - Thermodynamics. Thermochemistry.   B-8
            Equilibrium. Physicochemical Analysis. Phase Transitions.

Abs Jour   : Referat Zhur - Khimiya, No 3, 1957, 7494

Author   : Kovalenko, K.N. and Balandina, N.I.
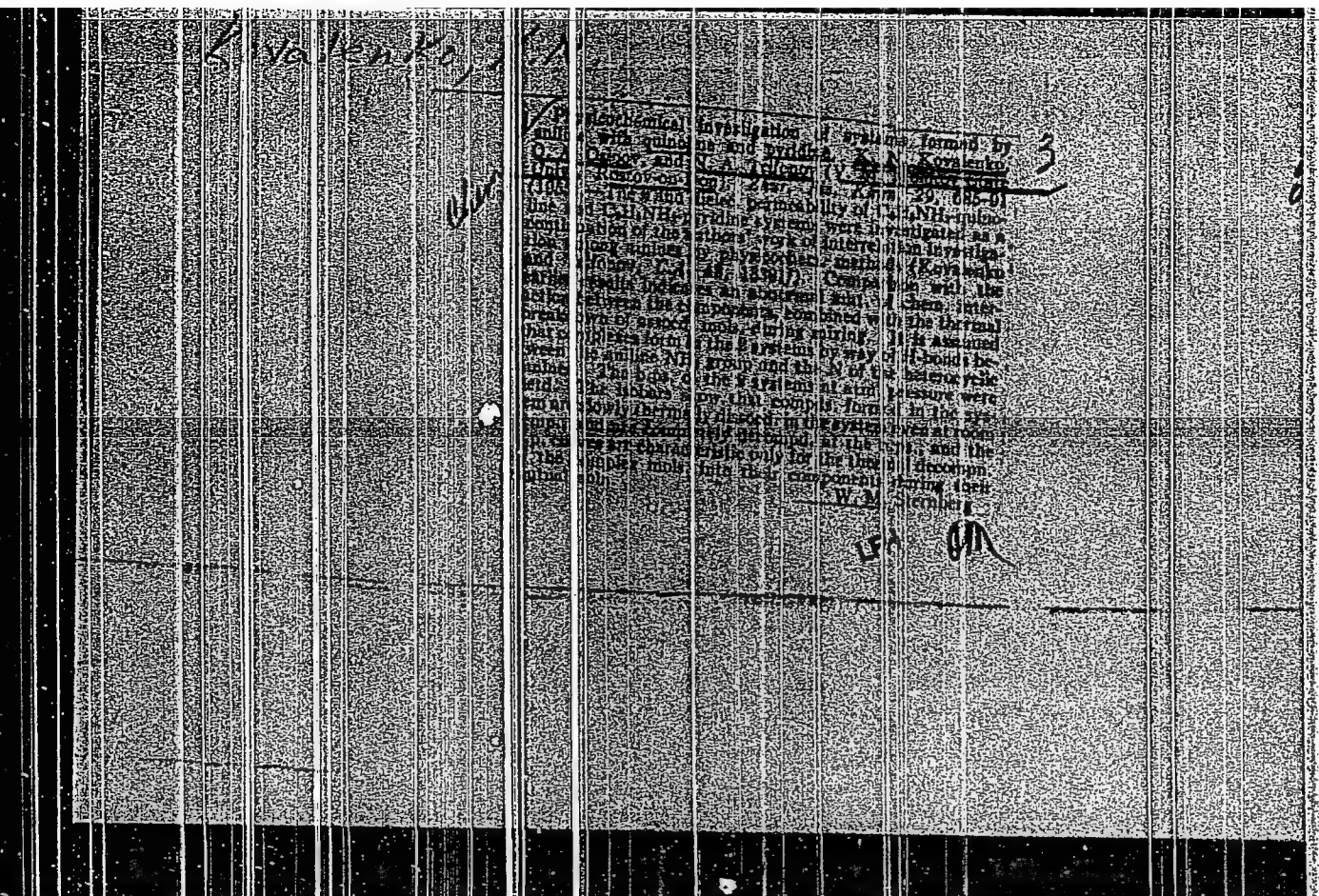Inst   : Rostov-on-the-Don University
Title   : Physicochemical Analysis of Amine-Containing Systems

Orig Pub   : Uch. zap. Rostovsk. n/D. un-ta, 1955, Vol 25, No 7, 13-18

Abstract   : The viscosity, density, and surface tension (at 0,25, and
             75°) of the quinaline-aniline (I) system have been inves-
             tigated. It was found that chemical reaction takes pla-
             ce in the system leading to the formation of a compound
             which dissociates in solution. In the region 25-80 mole
             percent I, the mixture does not crystallize but forms a
             vitreous mass, which made it impossible to obtain a com-
             plete melting-point diagram. The viscosity and density
             (at 25, 50, and 75°) and the surface tension (at 25 and
             50°) of a dimethyl aniline-I mixture have been investi-
                                                          gated.

Card 1/2   - 117 -

Zivalenko, A. N.

Physiochemical investigation of systems formed by
aniline with quinoline and pyridine. A. N. Kovalenko
O. G. Dragov and S. A. Askinazi (V. M. Kirov State
Univ., Rostov-on-Don). Zhur. Obshchei Khim. 29, 668-9

The a mol. refraction, permeability of the NH_2-quin-
oline and of the aniline-pyridine systems were investigated as a
function of the composition by a physiochemical method (Karnako)...

W. M. Stember

KOVALENKO, K.N.; TRIFONOV, N.A.; TISSEN, D.S.

Physicochemical study of the system: water -- acetic
anhydride -- dioxane. Zhur.ob.khim. no.9:2404-2410
S '56.

(MLRA 9:11)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
     (Acetic anhydride) (Dioxane)

of the system l-acetic acid, it is concluded that che-
mical reaction takes place in the system leading to
the formation of a compound which is considerably dis-
sociated in solution. The isotherns of the system
l-acetic anhydride show that in that system the interac-
tion between the components is nearly normal.
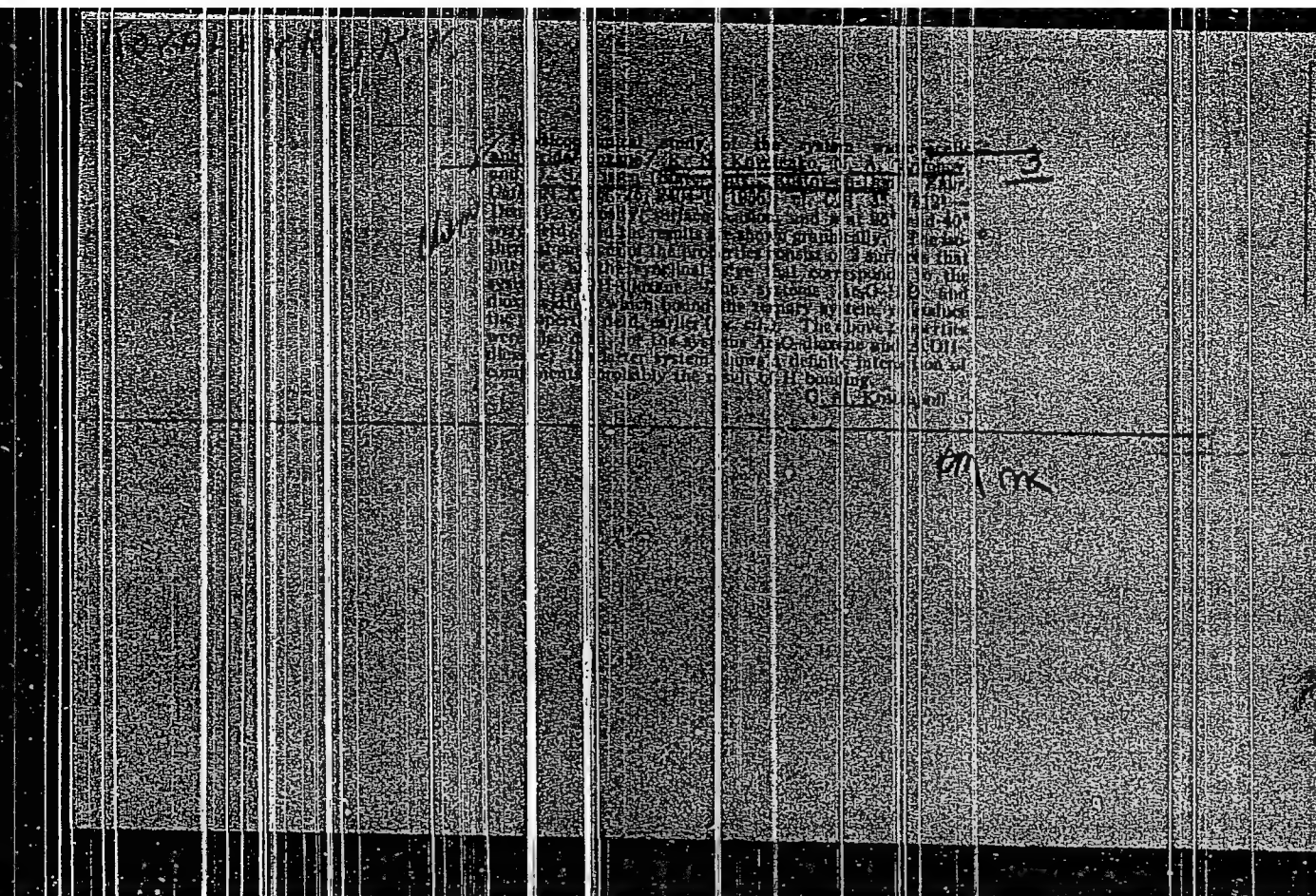
KOVALENKO, K.N.

Reduction of cadmium in a zinc electrolyte by metallic zinc. Uch. zap. RGU 40:87-91 '58.
(Cadmium)   (Zinc)   (MIRA 13:10)

KOVALENKO, K.N.; TRIFONOV, N.A.

Physicochemical analysis of the system aniline - ethyl alcohol;
viscosity, density, and surface tension. Uch.zap. RGU 41:45-50
'58.   (MIRA 15:1)

(Aniline) (Ethyl alcohol)

KOVALENKO, K.N.; BALANDINA, N.I.

Solid - liquid and liquid - vapor equilibrium in the system dioxane -
acetic acid. Uch.zap. RGU 41:39-43 '58.   (MIRA 15:1)
          (Dioxane) (Acetic acid) (Phase rule and equilibrium)

AUTHORS: Kovalenko, K. N., Vistyak, L. I.

TITLE: Concerning the Zinc Citrate Complex in Aqueous Solution
                (O tsitratnykn kompleksakh tsinka v vodnom rastvore)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 4, pp 801-807
                (USSR)

ABSTRACT: The complex formation by citrate and zinc ions was investigated
                in aqueous solution by measuring the electric conductivity
                and by means of potentiometric titration. By the determination
                of the electric conductivity it was found that the ratio of
                the components in the complex is 1:1. The potentiometric titra-
                tion with NaOH of a solution containing zinc sulfate and
                sodium citrate showed that at the point corresponding to the
                same 1:1 ratio of components a sudden change in the pH value
                appears. The stability of the complex was investigated at
                various pH values. The complex is stable up to a pH of 8.6; at
                higher pH's a decomposition takes place. At pH >8.6 in solutions
                with a 30-fold excess in sodium citrate a basic zinc citrate
                forms with the composition $[Zn(OH)C_6H_5O_7]^{2-}$ and a stability

Card 1/2   constant of $1.2.10^{-11}$. The dependence of the strength of the

Concerning the Zinc Citrate Complex in Aqueous Solution

diffusion current of the zinc upon the composition of the solution in the reduction at the mercury electrode can be used to ascertain the complex formation in the system $ZnSO_4 \cdot Na_3Cit \cdot H_2O$ and to determine the composition of the complex. The polarographic determinations confirmed the formation of a zinc citrate complex with the same 1:1 ratio of components. The papers gives the following tables: 1) The relationship of the electrical conductivity to the $ZnSO_4$: Na_3Cit ratio in the solution; 2) Results of the potentiometric titration of a solution containing equimolar amounts of $ZnSO_4$ and Na_3Cit;

3) Dependence of the potential of the zinc upon the concentration of Na_3Cit; 4) Dependence of the potential of the zinc electrode upon the pH value of the solution; 5) Dependence of the strength of the diffusion current of the zinc upon the concentration of Na_3Cit. There are 6 figures, 5 tables, and 9 references,

7 of which are Soviet.

SUBMITTED: January 17, 1958
Card 2/2

KOVALENKO, K.N.; MARKAR'IANTS, L.M.; SEMENOVA, I.M.

Electrochemical behavior of zinc and copper in foreign ion
solutions. Uch. zap. GU no.60:57-64 '59.   (MIRA 14:10)
        (Zinc)   (Copper)   (Electrochemistry)

KOVALENKO, K.N.; TARASOVA, M.N.

Physicochemical investigation of the interaction between thorium nitrate and phenylacetic acid. Zhur.neorg.khim. 5 no.2:385-392 F '60.   (MIRA 13:6)

1. Rostovskiy-na-Domu gosudarstvennyy universitet.
        (Thorium nitrate) (Acetic acid)

KOVALENKO, K.N.; IVANOVA, Yu.P.; VOROB'YEVA, S.P.

Zinc corrosion in solutions of sulfuric acid and a zinc electrolyte
in the presence of antimony and cobalt impurities. Uch.zap. RGU
41:27-38 '58.   (MIRA 15:1)
        (Zinc--Corrosion) (Electrolysis) (Antimony)

KOVALENKO, K.N.; MINKIN, V.I.; NAZAROVA, Z.N.; KAZACHENKO, D.V.

Dipole moments of some derivatives of furfurole. Zhur.ob.
khim. 32 no.2:549-553 F '62.   (MIRA 15:2)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
                (Furaldehyde--Dipole moments)

KOVALENKO, K.N.; KUSHELEV, Yu.V.

Mobility of the thorium ion. Zhur. fiz. khim. 36 no.4:814-
815 Ap '62.   (MIRA 15:6)

1. Rostovskiy universitet.
                            (Thorium) (Ions)

KOVALENKO, K.N.; KAZACHENKO, D.V.; IVANOVA, Ye.M.

Thorium salicylates. Zhur.neorg.khim. 7 no.10:2340-2344 O '62.
(MIRA 15:10)
(Thorium salicylate)

KOVALENKO, K.N.; KAZACHENKO, D.V.; SAMSONOVA, O.N.

Thorium subacetate. Zhur.neorg.khim. 8 no.4:797-801 Ap '63.
(MIRA 16:3)
(Thorium acetates)